Iktara in ConCert
Realizing a Certified Grid Computing Framework from Programmer’s Perspective

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Abstract
With the vast amount of computing resources distributed throughout the world today, the prospect of efficiently harnessing these resources to solve problems is a promising field of research. Historically, however, we have seen tremendous potential repressed because of the infancy of programming models that provide a robust and effective protocol for propagating the grid. In order to change that, we need a strong, well-defined programming model. This model should allow resource donors to expose current problems and application developer and the resource donors. Because donors who program adhere to the resource donor’s safety, security, and privacy policies. To better understand the design space of such a framework and better understand the requirements of the framework, and how to develop it, we perform a case study on a specific programming model, we perform a case study on a specific application developer and the resource donors. Because donors who program adhere to the resource donor’s safety, security, and privacy policies. To better understand the requirements of the framework, and how to develop it, we perform a case study on a specific programming model, we perform a case study on a specific

ConCert
The ConCert project proposes to use certified code to resolve this issue of trust.
Each program comes with a mathematical proof that the program adheres to the resource donor’s safety, security, and privacy policies.

More Information
ConCert Project Webpage
http://www.cs.cmu.edu/~concert/

Jobs, Tasks, and Cords
Job
A workflow plan that is matched into the network from the command line. The unit of computation is the job.

Task
The unit of computation from the programmer’s point of view. Computing a piece of code along with its arguments.

Cord
The unit of computation, validated by the ConCert software.

Example: Mergesort

NullPointerException
	Error: bad value passed as 0th argument

Focusing

ML Interface

Future Work

Prover
Integrate with ConCert software.

Programming Models
Implement compiler.
Find how to determine if or ensure that data is manipulable.

Are there more primitive constructs?